STATEWIDE DISTRIBUTION OF BROWN MARSH AS DETERMINED FROM AERIAL SURVEYS

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Widespread vegetation dieback in the salt marshes of Louisiana was first observed in the spring of 2000. Monthly aerial surveys have tracked the extent of the dieback in Lousiana and Texas. Bimonthly ground surveys have begun to investigate the effects of the phenomenon. Aerial surveys were conducted in southeast Louisiana in June, August, September, October, and November, and in southwest Louisiana/southeast Texas in August and October. Results from USGS National Wetlands Research Center fix-winged aerial surveys in August over coastal Louisiana (2995 sample points), combined with results from Louisiana Department of Wildlife and Fisheries helicopter surveys in southeast Louisiana (557 sample points) indicate that the greatest effect (severe and moderate browning) on saline marsh was in Terrebonne Parish (73,840 acres) followed by Lafourche Parish (55,704 acres). All parishes surveyed (Cameron, Iberia, Jefferson, Lafourche, Plaquemines, St. Bernard, St. Mary, Terrebonne, and Vermilion) showed some impacted marsh acreage in at least one of the four marsh types (fresh, intermediate, brackish, saline). Observations from aerial surveys indicate that as of the first of December 2000 most of the severely impacted sites had failed to recover. Areas characterized in June by standing dead vegetation had become mud flats completely devoid of any living or dead plant material by late November. Preliminary indications are that these severely impacted areas will remain mudflats with little chance of recovery in the short term. Additionly, since these severely impacted areas are unvegetated mudflats, they are extremely vulnerable to soil erosion and loss of soil elevation, resulting in increased potential for conversion from marsh to open water habitat. Moderately impacted areas are showing signs of becoming greener and may recover if environmental conditions improve. However, if conditions do not improve they could continue to degrade and become severely impacted sites. The conversion of emergent marsh to open water in coastal Louisiana could increase by 100,000 acres or more in the next year if current trends continue.